


ON
SELF-TRAINING
BY THE
MEDICAL STUDENT.



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THE INTRODUCTORY LECTURE, DELIVERED IN UNIVERSITY
COLLEGE AT THE COMMENCEMENT OF THE
MEDICAL SESSION, 1856—1857.

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ON SELF-TRAINING BY THE MEDICAL STUDENT.

GENTLEMEN,

IT is a common saying, that a man self-taught is well-taught. Without troubling ourselves to determine with exactness the amount of truth in this maxim, we may yet say that it contains some truth; for it implies the beneficial effect on the mind of that strong and earnest will with which the man whom we call "self-taught" seeks for and gathers, in spite of all obstacles, the knowledge which circumstances would seem to render inaccessible to him. In a certain sense, however, all men are self-taught. However various, however rugged or smooth the road may be, along which men toil to the same end, a knowledge of the works of nature, it rests with the individual himself to accept or refuse the opportunities of progress offered to him. Some amount of will, some degree of independent action, are demanded from every one. Each man is, to a certain extent, the architect of his own mind; food is spread before him and he

can eat; it depends upon himself whether this food shall nourish him to the full stature of his race, or whether it shall leave him stunted and unformed.

It is not of course in early life, in the days of boyhood, that the mind recognises the responsibility which rests upon it. Except in the case of a few gifted natures, the will exerts little influence on the mind's progress until that period when the boy is about to pass into the man. The alterations which occur in the bodily frame at that time, are only counterparts of the mental change. The mind then begins to learn self-knowledge, to reflect, to direct itself, to be conscious of a will which can admit, reject, select; which demands independence, and which can no longer brook to be the vassal of another. At this period, then, by common consent, in all European nations, the mode of education changes. The useful routine, the compulsory teaching of the school, give place to the more diversified; and, so to speak, more independent labours of the college. In just proportion to its progress, the mind is allowed liberty of action. The professor of the college is not responsible, like the master of the school, for the progress of the pupil; the responsibility is shifted from the teacher to the taught. The professor shows the way to the fountain of living waters; but he can make no one drink thereof. He who wishes to

drink must himself take his pitcher, and toil painfully over the mountain road; he can be cheered by advice, and sympathy, and companionship, but the pilgrimage he must himself perform.

It is very necessary, then, that the young man, passing into that important period of his life, when his college teaching is to give his mind what may be its final mould, when the profession which is to occupy his future life is about to be taught, should fully recognise the change in the system of tuition, and should be aware that everything now depends upon himself. He should say to himself: "I am come to that period of life in which I am told the greatest formation of character goes on; in which my mental and moral qualities undergo the greatest change; I am told that it rests with me whether I profit by or neglect the advantages now placed before me. How, then, shall I enter on this new period? What will be the effect of this profession I am entering on my mind? How shall I make the best use of its advantages, how learn to fulfil its future duties?"

These are not questions to be answered lightly, nor to be discussed in the short compass of an hour, but the object of this lecture will be answered, if I can aid the student in this inquiry, and can submit to him suggestions which may be of some use to him in his college life.

This college will give him all the external apparatus of education in perfection; he must give himself the internal impulse, the will to act, and the determination to qualify himself for the life-long business which he commences to-day.

First of all, then, let us consider the effect of medical studies on the intellect.

The powers of the mind, which it is most important to cultivate in early life, are those of attention and of memory; and the first thought of the student should be to train these powers to the utmost. He may at first safely neglect, or rather pay less attention to the faculties of judgment, imagination, and close reasoning. If he can succeed in acquiring the habit of fixed attention, which implies the power of rapid comprehension, and if he cultivate his memory so as to make it easy to receive, strong to retain, and prompt to recall, the student will have laid the foundation on which all the higher powers of the mind are to be based.

The labour of cultivating the powers of attention and memory is undoubtedly great; in youth the mind is versatile, and the memory capricious; many young men give way before these obstacles, and cannot summon will enough to bend the flagging mind to the task before it, or to exercise enough the treacherous and failing memory. Yet if the student could know how at a future period of his life he would appreciate the im-

portance of these powers, if he could foresee how, by a greater or less exercise of will in his student-days, he influences the compass of his mind for all time, no effort would seem too great, no exertion too laborious. Whenever he entered a class-room, he would look upon it as the arena in which his mind was to undergo discipline, and training, as well as the room in which his profession was to be taught. He would say to himself when he went out, not only, "What have I learnt, but how have I learnt; did I, in spite of uneasiness, of distaste to the subject, of pre-occupation, compel my attention to the day's task, resist distracting influences, and sternly order this servant, my mind, to follow the course marked out for it?"

Thus the lecture-room should become day after day the theatre of intellectual conflicts, in which, like the bodies of the athletes of old, the mind prepares itself by exertions, often wearying, often disheartening, often disappointing, but always strengthening, for the beauty and the vigour of its full development.

Happily the subject with which the medical student commences is, perhaps, the best adapted of all sciences for thus teaching the power of attention and memory. Even mathematics, so much vaunted as a means of mental training, seems to me less adapted for early tuition than anatomy.

In human anatomy, as it is taught to the student, little imagination or reflection is required. But a constant reference to objects of sense, to the thing taught, makes attention easy; and a multitude of facts which *must* be learnt are arranged in an order which permits association to assist memory. To the medical student, anatomy is not only the basis of his future medical knowledge, it often constitutes the foundation of his mind. If he become a good anatomist, he has gained more than anatomy; he has acquired mental force; and nothing can prevent him (except his own future failings) from becoming a good chemist, physiologist, or physician.

But human anatomy possesses another claim on the student's attention.

From it, he learns one of the most important lessons in science — the necessity of affixing a precise, definite, and unchangeable meaning to the words he uses. He learns to be clear in thought and clear in language. Anatomy permits no obscurity; its range is limited, but within that range it is clear as crystal. Unlike almost all sciences, it hangs out no shield, golden on one side, silver on the other, for passers-by to quarrel about; it has no ill-defined conceptions which it seeks to express by a cloud of ill-understood terms. It boasts the best possession of science, a phraseology which cannot mislead. It thus teaches a lesson which no student must

omit to learn, that before he uses a word or phrase he must see whether he understands it; and if its meaning is not quite clear to him, he must throw it aside. Better that the student should use the simplest, the homeliest words of his mother-tongue, than that he should run the risk of disguising or falsifying his meaning by the use of words drawn possibly from dead tongues, the full import of which he cannot comprehend.

Thus, from anatomy, the student should acquire power of attention, strength of memory, clearness of conception.

The next subjects which he has to grasp carry the training of the mind farther. In Physiology and in Chemistry there is, as in anatomy, the same constant reference to objects of sense, a similar careful precision of language, and so far the same influence on the mind. But the limits of both these sciences are not defined like human anatomy; their extent is immeasurably greater, and they deal with problems which, either from their vastness or their obscurity, can be but imperfectly expressed by words. On every side, indeed, the teacher and the student are on the borders of a debateable land.

Imagination is therefore strongly exercised, and the mind easily acquires a longing for inquiry, a desire to penetrate into what is dark, or a habit of speculating as to what may be, when

it is impossible to determine what is. These tendencies, exercised with judgment, form the foundation of the scientific mind, and the force with which they urge men forward in paths of inquiry is something wonderful. They are therefore highly useful, and, indeed, indispensable at a later period of tuition; but the student will do well to carefully control, direct, or even, for the time, totally suppress them, otherwise his mind will become unstable; he will confound certainties and probabilities, and his conception of truth will be weakened. For as in his case speculation cannot be corrected by direct experiment, and as imagination is not kept in bounds by a sufficient breadth of knowledge, he will arrive at conclusions which are utterly unstable, and form inferences which a deeper study would have shewn him to be impossible. The wisest course, then, for a student is, to repress all independent inquiry, to accept what is told him without seeking to pass beyond it, and to be satisfied with what may be termed the routine of science, until he is quite sure that he can avoid confounding probability with ascertained fact, and has learnt to subject all doubtful explanations to the test of a rigid and unsparing logic. The student will be obliged to learn, indeed, how often, like Saturn, the man of science has to devour his own children, when their existence threatens the stability of truth.

I may illustrate my meaning by a simile, which seems to me to express the spirit in which science should be learnt, and at a later period investigated, and which is also especially applicable to the practical use of medical science.

An army gives us an example of two most opposite conditions of intellect. The first is almost blind obedience working to an end, with scanty knowledge of the steps which lead to it.

What more wearisome to the recruit, than the early process which converts him into the finished soldier. How he surrenders his own individuality; how he repeats the same movements, the same tedious evolutions. How little he can foresee the use of all the drill, the precision, the complicated changes of position, which he has to assume instantaneously at the command of another. And yet without this elementary knowledge, without this perfect obedience on the part of the soldier, the combined movements, which make the army the most wonderful machine of human invention, would be impossible. It would be a mob, resultless, powerless, useless, recoiling before the least difficulty; scattered to the winds by an organization better than its own, instead of being as it is, like a giant with a thousand arms, governed by one will and swayed by one resistless impulse.

So with the student of science; his first footsteps are over the dull routine of elementary

knowledge; everything around him is obscure; he learns, but the use of what he learns is not apparent; he is told of things, the application of which he cannot see; and the truths of science seem to him, it may be, like a heap of stones, non-coherent, arranged without method, and devoid of beauty and of grace.

It is, indeed, the most irksome period of his student's life; he is told to attend, to remember, to recall his instructions at command; but he is not allowed to think for himself, nor to go out of the beaten paths which are trodden by all around him. And, like the soldier, he must obey.

But there is another and a higher spirit animating an army; a spirit of invention, alteration, innovation, daring combination. A great soldier is the most original, and the most inventive of men. At every step of the campaign, fresh incidents arise for which he finds no precedent, and novel combinations for which his previous experience had no way prepared him.

Does he adhere to his old practice, to his former routine, to the suggestions of the spirit which looks to old-established customs, and to the traditions of yesterday, to combat the unknown trials, the new expedients and the untried foes of to-day? then his army is swept away before an intellect more commanding than

his own; or before the storms of nature, for which his foresight did not prepare; then pierced through, and scattered without hope of rally, smitten by an artillery, for which his puny cannon are no match, or overwhelmed by winter with its bitter cold and its heaps of snow, his gallant soldiers lie deep in the fatal trenches, victims to the policy which was inspired only by the memory of the past.

But if the general be not only a mechanical soldier, but a man of genius, the obstacles which he encounters, instead of crushing him, become his agents; and the vigour of his foe calls forth only the hidden powers of his fertile mind. In the narrow isthmus into which he is driven by superior numbers, he finds an impregnable fortress; with the rocks, which rolling from Alpine heights would crush an army, he fills the chasms and forms the road; when all seems lost, one brilliant charge redeems the fortunes of the day; and in the desert, with its waves of sand, he smites the rock and pours forth water for the thirsting host.

Yet, on the other hand, a great soldier, whatever new combinations he may form, always grounds them upon the fixed principles of his art; he never injures the general formation of his army, or recklessly abandons conquests already won, or permits himself to be carried by a daring conception beyond the limits and powers of his force.

So also in Science; fresh problems, fresh facts, fresh intricacies rise each day before the labourer, and demand enquiry, arrangement and elucidation. Invention and imagination are called into play; but at the same time the army of disciplined and orderly facts, the rank and file of scientific movement, are not abandoned or disarranged; impossible combinations are not attempted, and old positions, once fairly assumed, are not causelessly surrendered.

If this be true for the enquirers in science, it much more so for the learners. The student of science does not possess the facts on which discoveries can be based. In science, as in an army, there are gradations of rank, from the philosopher, who has drilled and ranged a host of facts, to the ensign, who has only a section of a company. What the one may accomplish without risk of failure, the other could not attempt without the certainty of defeat. Slowly and laboriously the student must pass through the grades of knowledge. In science, every man must rise from the ranks.

The student, then, should be contented with tracing the courses of the mountain-stream, in whose clear waters he can see every stone which forms its bed, and every water-plant whose delicate leaves are bathed by its flow, and not too ambitiously hasten to explore the muddy course of the turbid rivers, or the depths and quicksands of the treacherous sea.

I have dwelt thus long upon this topic, because I remember when I was a student at this college, there was a great tendency to underrate the claims of memory and mere acquirement of facts, and to prize the, at first sight, more brilliant qualities of so-called original enquiry and invention. The hard-working attentive student, committing to memory with great labour a host of facts, was looked upon as a dull fellow, compared with the showy debater, who was ever ready with an explanation, with a hypothesis, or a bran-new theory to make all things clear. But was ever mistake greater than this; to prefer mere quickness, which is often superficial, and almost always unfruitful, to the power of long-continued and patient attention; to prefer the power of a premature and petty invention, to the possession of a tenacious and comprehensive memory; memory, which is, indeed, the mother of invention, for every creation is half a recollection; memory, which brings the stones for artist-hands to rear, which plants

Those peerless flowers, which in the rudest wind
 Never grow seer,
 When rooted in the garden of the mind,
 Because they are the earliest of the year.

TENNYSON.

This, then, is the next great lesson I would propose to the student; while he should first learn to listen with attention, to recall with ease,

and to express with clearness, he should, in the second place, learn to keep guard over the impulses of his imagination, and not to venture, except with great caution, into the domains of original investigation. He may be certain that insensibly the progress of his studies will gradually develop his inventive and reasoning faculties; and by the time his student career is drawing to a close, he may safely permit his mind to exercise its higher powers of independent reasoning, comparison and invention.

From the study of physiology and of chemistry another lesson may be drawn.

The facts of human anatomy are arranged in a comparatively small compass, and are easily carried by every mind. The facts of physiology and chemistry are almost boundless; they multiply yearly, and are often to a great extent unconnected. It is in learning them, that the student first perceives in its full force the necessity of order.

Facts can be best remembered, oftentimes can be remembered only, when they are arranged in a certain manner, so as to recall each other, and to aid the power of association. The singular effect of a good arrangement is most marvellous. The comparison of an undisciplined mob and a trained army again rises to the mind; there is not more difference between a crowd where each man presses against his fellow, now this way, now

that way, unable to advance or recede, and driven hither and thither against his will, and an army, where each man knows his place, assumes a certain rank from which he can be called forth, and to which he can with ease return, and also form part of a mass which can be turned at will to the four quarters of the heavens, and can pass unconstrained in each direction; there is not more difference, I say, between these two bodies of men, than there is between the mind which commits facts to memory, then throws them without further thought into a heedless crowd, to be trampled upon and crushed out of shape, and the mind which puts its facts side by side, each under its own banner and in its own cohort, and knows at any moment where to look for what it stands in need of.

The student should bestow great thought on this subject, and should carefully consider what arrangement seems best adapted for his own mind. Minds are of such infinite diversity, that no rule can be laid down which has a universal application. As a general maxim it may be said, that the student should first follow the order used by his teacher; the successful teacher is, in fact, the man whose method is applicable to the majority of those who hear him, and such students cannot do better than follow his guidance.

I may be pardoned here, if I recall the time

when, as one of the youngest and most untrained students of this college, I attended the course on Physiology. Commencing, as I did, in perfect ignorance of the subject, with the very terms and commonest phrases sounding uncouth and foreign to my ears, never shall I forget the ease with which that wonderful science was spread out before me. The dullest mind could not fail to be taught by that marvellous order and unrivalled clearness of explanation, the result of thought deep enough, and that thought must be very deep, to comprehend the wants of untutored minds.

Another mind seemed to be formed in me by the force of that perfect exposition; for the first time I seemed to recognize the beauty and harmony of truth. And many of my hearers to-day will learn, during this session, to feel a debt of gratitude similar to that I shall always experience to the great teacher who so impressed my mind, and who has impressed the minds of hundreds, and who happily still remains to unfold before us the wonderful facts of physiology.

The student then will do well to accept the order and arrangement of his teacher. As, however, minds are variously constituted, he can, if he pleases, try whether some other order may not be more applicable. That is to say, he takes the facts he has heard and recorded, and re-unites them in a different arrangement, and in other

words. I remember, when a student, throwing in this way the facts of *Materia Medica* into two or three different forms with great advantage to the memory. *Materia Medica*, although one of the most important subjects, is often neglected, as from the nature of its heterogeneous facts, it is difficult to arrange them in an order which is easily accepted by the mind. In this case, the advantage of devising an order for oneself is often very great, even when the order used by the teacher is the best, and is eventually adopted.

The subject of *Materia Medica*, indeed, may be considered by the student as a kind of trial or test of his mind; as far as attention, memory, and orderly arrangement are concerned, if he masters it easily, and can recall readily its facts, he may conclude that he has derived the proper amount of training from the subjects which have gone before. But whether easy or difficult to him, this subject must never be neglected; no man can be a good physician or surgeon without a perfect knowledge of the agents he is to use.

From these fundamental subjects, the bases of Medicine and Surgery; and from a slighter study of other sciences, such as botany and zoology, which though not indispensable for a knowledge of medicine, are yet of the very greatest importance for enlarging and training his mind in other fields, the student advances to

the grand subjects which are to him all important, as from them he is to learn the art to which his life is to be devoted.

Medicine, with morbid anatomy, surgery, and midwifery, are studied, according to the present system, during the last two years of the student's career, but as during the first of these years, anatomy, physiology, chemistry, botany, and zoology are still engrossing his attention, it may be said that in reality one year only, and sometimes not that, is given up to the exclusive study of medicine and surgery. This is a great mistake in medical education; from it results the undoubted fact, that many students who acquire a very excellent acquaintance with anatomy, physiology, and perhaps with chemistry, leave college without a corresponding amount of medical and surgical knowledge. In fact, at present, in our English schools the most defective part of medical education is in those very branches which are to the future practitioner in medicine of the highest moment. This arises from a want of time, and from an undue crowding of subjects; but it is not easy to see how it can be avoided without lengthening the period of the curriculum of study, and adding thereby to the expense of medical education.

The student, however, may himself do something towards its correction, by always looking forward to the later period of his study, and by

compressing the earlier subjects, he may leave himself, as far as possible, free to devote his time exclusively to medicine and surgery, for at least the last eighteen months of his studentship. In the study of these two subjects he will find ample occupation; they will test most severely his powers of attention, and of memory, and the calmness and logical vigour of his judgment. Surgery, indeed, as far as regards its mechanical and operating branch, and midwifery, as affects its practical application, are comparatively easy; for a vast amount of mechanical ingenuity, in this age of contrivances, has been brought to bear on these subjects; they are in a high state of perfection, and are easily learnt and remembered.

But medicine, under which term I include also a large part of what is taught by the several professors of surgery, midwifery, and *materia medica*, is far more difficult.

It is not that it has not been explored; for 2000 years many of the ablest minds ever created have studied it; it is not that it is destitute of solid foundation for its facts, its certain truths are almost innumerable; it is not that it is unsusceptible of application, for by its means thousands of human beings are daily relieved from pain and misery; its difficulty arises from its extraordinary diversity and extent; it is probably the last science which will be rendered

perfect by man, if perfection be possible; it is, in fact, intimately connected with man's progress, and its condition is typical of his own.

In studying it, and, in after-life, in practising it, the highest qualities of the mind are necessary; every disease is a problem half known, half veiled in darkness; every patient presents us not only with an example of what we know, but with something which is peculiar and especial to the example; the medical practitioner has to make a constant reference to his memory, to recall and recognise the *type*, and to his judgment and invention to comprehend the *variety*. What attention, what method, what careful reasoning—for error may be death in such a case—are demanded from the man who practises our art? How can any student hope to pass out from these walls a competent practitioner, unless he brings to the study of medicine a mind trained to the highest degree of which it is susceptible, by the preparatory sciences? Happily for him, these sciences not only give him the knowledge he requires before he can study medicine, but in the very best manner cultivate his mind, mould it into the form and endue it with the action, which can alone suffice.

In medical science, on account of the great difficulty of full investigation, greater caution is necessary in the reception of assertions and reputed facts than in many other sciences. Facts

are by no means so easily ascertained as in anatomy, or chemistry, or physiology. Experiments cannot be repeated as in these cases; we cannot, as Bacon recommends, ask questions of Nature; we are compelled to watch for what she shows us, and very transient glimpses are often all we get. The student, therefore, should accustom himself to weigh and consider facts; to practise philosophic caution, to grow, within moderate bounds, sceptical of fresh statements, unless the evidence be very satisfactory.

It is now, too, that the student will find the advantage of having repressed that tendency to invent explanations, and to find the causes of every phenomenon, which is the characteristic of quick and ardent minds, who do not know how imperfect our knowledge of causes is. In medicine, we constantly act upon ascertained facts, which we cannot fully, or cannot at all explain. We are satisfied to imitate the sailor, who steers by the compass, without knowing the explanation of the fact that the needle points to the poles. Scarcely anything has done more harm to medical science than the apparently almost inveterate tendency to theorize which has prevailed for the last hundred years; theory after theory has passed over the stage, like Banquo's ghosts, each equally transient and equally unsubstantial. The same tendency is even seen in many works which are now published; and

in papers in the medical periodicals, we frequently find reports of very obscure and complicated forms of disease, coupled with most rash and crude explanations of the nature of the malady, and the action of the medicine used. Happily, however, this disposition is now less. In medicine, as in all sciences, we are learning to gather facts, and disregard forced explanations; we are contented with the products of the earth, which we can see, touch, and handle, and cease to gaze on the clouds, which cheat us with the appearance of solidity, but disperse into air when the least wind blows.

Much assistance is given to the student in medicine and surgery by the power of constantly aiding the teaching of the lecture-room by the practice of the hospital. The two modes of study must be conducted together; neither alone will suffice: the knowledge contained in books is to be imprinted by the lessons of the ward, and the actual phenomena of disease must give life and interest to the descriptions in books. No student will do justice to himself or to his art if he neglects either mode of teaching.

Thus, at the end of his career, the mind of the medical student has passed through one of the most complete courses of training which could be devised. I do not think any other mode of education can boast equal advantages. The sciences which compose it demand the most

rigorous attention, a perfect comprehension, a rapid and true memory, an exact and clear expression, a regulated invention, and a cautious and logical consideration and judgment. After such an education, every other science is easy to the mind, because the same methods are applicable to all subjects, and none are so extensive or so difficult as those which make up the education of the medical practitioner. As far, then, as the intellect merely is concerned, the medical student has reason to rejoice that he is about to enter on a profession which, if he will do justice to himself, must inevitably elevate and ennoble him. But the intellect alone is but the lesser half of man. More important than the head is the heart, and the brightness of mere reason is eclipsed by the beauty of moral worth. A profession which should elevate the perceptive and reasoning powers, and leave untouched, or should debase, the moral qualities, should be shunned like a pestilence; the worship of the intellect is the worst kind of idolatry.

Every profession has its own trials and its peculiar temptations. Perhaps at some future period the moral guidance of youth will not be left, as now, almost to chance, but the special tendencies of the future career will be foreseen and provided for. Every occupation has its own training for the moral faculties; and though it is perhaps Utopian to suppose it, the time may

come when parents will deliberate on the profession their sons are to follow, not merely in the light of a profitable investment of capital, of a trade which is to bring in worldly wealth, but as a training which is to teach what is “better than rubies, yea, than fine gold”—integrity, temperance, charity, and honour.

For the last two years, the English people have been thrilled with admiration at the actions of that noble army which, like the Roman legions of old, has turned back from the fertile plains of Thrace the fierce soldiers of the North. Can, indeed, any picture of human endurance, of human heroism, be more vivid, more startling, more wonderful, than that which the pen of genius has drawn of the deeds and woes of the armies before Sebastopol? Does it not read like a tale of romance, that history of those wan and wretched men, half-clothed, unfed, shivering beneath the icy blasts of that inclement sky, drenched by the snow-drifts from the icy steppes, exposed to storms of shell and shot, which were only surpassed in destructiveness by the fiercer wrath of heaven, dying in masses, or hopelessly anticipating death, does it not, I say, seem like a romance, that these men, day after day, formed their parades, cleaned their arms, prepared for conflict, wrapped their tattered and soaking blankets round them, and without one murmur or one regret, passed across that dread ravine, so

significantly named "the valley of the shadow of death," and entered the unsheltered trenches, which they knew would be the certain graves of some of them? What motive could thus impel men to deeds like these? Was it the love of money, the hope of fame, the burning of emulation, or the rage of war? Was it the effect of discipline, the influence of companionship, or the call of duty? To the private soldier there flows in no money, and but little fame; emulation can scarcely exist where reward is impossible, and the passions of war have lost in great measure their character of personal antagonism. But no matter what the motive, the action was sublime. On the heights before Sebastopol, those sacred heights, for they are hallowed with the blood of a great sacrifice, the world witnessed deeds which ennobled that bloody strife. For if war seem to us at first the work of demons, rather than of men, the heroism and the self-sacrifices which it calls forth, tinge that strife with hues from heaven, and make it holy.

So great an example, so noble a self-sacrifice is not often manifested. It is given to few men to be thus raised on the mountain of sacrifice and made visible to the world. It is ordered to few men to ascend that mountain with feet so torn, with hands and side so pierced. And yet it seems to me, that private life and the ordinary

course of the world's business, oftentimes demand self-sacrifices, which, if less intense, are more prolonged, than that of the Crimean soldier, and perhaps made, as they often are, in the silence and secrecy of an unnoticed career, are not less noble.

If there be a body of men whose lives present a parallel to the campaign of the Eastern force, it is that profession whose efforts are directed against foes not less murderous than Russian bullets, or less deadly than nature's storms, and whose way lies daily through the valley of the shadow of death. There are young men here, who will single-handed have to march across the Indian plains with regiments smitten by cholera; who will have to encounter the outbreak of typhus in the crowded ship, or the scarcely less dangerous and harassing epidemics of a poor and poverty-stricken people. Amid all the heroism of the Crimean army, the self-sacrifice of the surgeon left on the field of Alma to tend his sick and wounded enemies, stands brightly forth; and no more noble act was performed by its bravest chief than that of the young surgeon, who some years ago voluntarily went to meet his death on board the "Eclair" steamer, bearing its deadly fever from the African coast.

But not only in such great trials, to meet which the mind and soul may be for the time

nerved and braced, but also in the daily and hourly practice of our profession, the same qualities of courage and self-sacrifice are demanded. We have to bear not merely the risk of disease, a trifling matter, but we are called on to become the close witnesses, and oftentimes the sharers, of the anxieties, the fears, the agonies of our fellow-creatures. We have to forget ourselves, to surrender our own wishes, our comforts, our pleasures, to bear without complaint the murmurs of sickness, and sometimes to listen unresentingly to the harsh criticisms of those whom grief has made unjust. No man should enter on this profession without knowing that its pains are constant; its pleasures few; its sacrifices great; its recompenses scanty.

The training for such a career cannot commence too early; courage, fortitude, consideration, sympathy, kindness, gentleness, will all be wanted; are not these qualities, which it is worth striving for, qualities more precious even than the quick mind and the true and ready judgment. Are not these the qualities, in fact, which a man would have, could he follow rightly the teachings of that inspired volume, which is the foundation of our belief, though so seldom the guide of our practice?

But in the days of studentship, we have not only to prepare for the demands which will at some future day be made upon us; this period has

its own trials and it own sacrifices. The materials for medical education are, unfortunately, only to be found among the crowds of great cities; and the student of medicine, is, therefore, often obliged to carry on his studies, separated from his friends, and without the restraining and purifying influences of home. At an age when passions are strongest, and self-control is weakest, he is thrown among temptations, which possibly his pure mind had never conceived. How many young men yield to these temptations, those who have lived among them know. Many a young man who came to London pure in heart, and noble in feeling, has brought ruin on himself, and disgrace on his friends, by weakly yielding to the temptations of the tavern or the low billiard room, or to the seductions of the profligacy which is the curse of our towns.

How can a man who inebriates his brain with drink, do justice to the profession, which demands, more than all others, the most unremitting application, the nicest perception, the most careful reasoning; how can a man who follows the facile morality of the day, and who degrades his purity, and lowers the tone of his mind in the company of prostitutes, oftentimes the coarsest of their kind, how can such a man worthily practice a calling to which the honour of women and the happiness of men, is, more than to all others, committed? Independent of

the loss of mental force, of the loss of health, which such practices bring with them, the young man loses what he can perhaps never regain, his conscientiousness and his purity.

But not only in resisting such temptations may the student acquire strength of will; he will be beset by many others more innocent, and therefore, to well-taught minds, more dangerous. He is in a world of pleasures, which appeal not only to his desire of ease and of enjoyment, but to his sense of the beautiful, and to his love of art. It is no small sacrifice to many men to forego the attractions of music and the stage, and to turn sternly to the appointed tasks of the hospital and the dissecting room. It is no small sacrifice to the lover of nature to forget the summer sun, and the deep green of country fields, and to enter the dead-house, with its fetid air, and its pallid corpse.

Yet these sacrifices must be made, if the student fulfils his duty to himself, to his friends, and to that profession whose responsibilities he assumes when he enters these walls. In making these sacrifices, indeed, he is preparing himself for that course of duty, and of self-denial which lies before him; and if he feels them heavy upon him, let him bring before his mind the memory of those greater trials which so many of his countrymen have lately gone through. The courage which animated them, is what he needs

now; the self-sacrifice which ennobled them, he can imitate now. Let him not be discouraged by the difference between his sacrifice and theirs; to him who reads the heart, it may be, that as great victories have been won in the simple lodging of the youthful student, as beneath those blood-stained walls, where the chivalry of the world has contended for the prize of arms.

The practice of our profession demands from us, however, not merely the surrender of selfishness, and the abnegation of self-interest. We are mixed up so constantly in the affairs of other persons, that the greatest circumspection, prudence, truthfulness, justice, and consideration for others are necessary. Perhaps not even the legal profession has more delicate moral questions to deal with, or is more obliged to know the varieties of human nature. We are brought into contact with all classes, and are parties to the interior life of many households. Secrets are necessarily entrusted, and confessions are made, to us. We are admitted into the recesses of many consciences, and are enabled to trace motives which are dark to others. We are often brought into collision even with members of our own profession, in the inevitable strife and struggle of civilized life. How important it is then to recognise the moral obligations we lie under, and to act towards all men with justice, faith and tenderness.

For this sort of training the college life possesses great advantages. It is a microcosm, in which is rehearsed some of the struggles, and the pageants of the larger world without. There is generous emulation, and competition; there is detracting envy and dislike; there are treacherous friends who reveal the weakness of their companions, and generous rivals who conceal it; there is the profligate section, who laugh at the dictates of morality; and the nobler class, who recognise and honour its claims. Among these influences, the mind of the student is formed, and it rests very much with himself, whether or not he emerges from them loving truth and honour, and actuated by high and noble motives in his dealings with others.

In the pursuit of our profession there is another influence of some importance.—The trials and sufferings of which we are the witnesses develop in some minds to its highest degree the feeling of pity. In other persons again, the constant repetition of the same scenes blunts their susceptibility, and renders them almost indifferent to suffering; while, among a third class, the perceptive and reasoning powers are so predominant, that sick men are looked upon rather in the light of machines exhibiting interesting phenomena, than as fellow-creatures suffering pain and dreading death.

The two last states of mind are to be guarded against most carefully; the man who has no pity, and therefore no sympathy, can never be a true physician; the art of curing disease is not solely physical; the minds of our patients must be ministered to, and moral influence must aid the coarser means of cure. It is particularly necessary in youth to avoid the third character of mind; to know that the treatment of the sick is not to be degraded into a mere scientific problem, but is to be conducted with the interest of one who feels and pities the sufferings he endeavours to remove.

Thus, then, in the career which lies before the student, he will find, that though great trials and difficulties may be in store for him, yet if he be true to himself, his moral will equal his intellectual education. He will have no reason when, towards the close of life, he looks back with an eye sharpened and, at the same time, chastened by experience, to regret that his life has been spent in endeavouring to fulfil, as far as in him lies, the demands of a profession which has power both to cultivate the mind and to purify the heart.

There is one point more which I would urge on the attention of those who commence their studies here to-day.

Physical health, the health of the body is only

less important than that of the intellect or of the heart. In cultivating our reason, we must not forget the claims of its dwelling-place. The habitation must be kept sound, if those who live there are to be vigorous and strong. It is certain that physical vigour reacts on mental strength; the man of weakly frame perhaps never reaches, or reaches only for a short time, the full height of his mental power. The want of physical strength, even if the mind be uninjured, greatly hinders usefulness, and places a bar before many well-meant endeavours.

It is especially in youth that physical education must be carried on; many of us who overlooked this, and who ignored in the flush of youthful vigour the necessity of attending to the health of the body, bitterly repent their carelessness in after-life.

It is not, indeed, easy, in a city like this, to find very good means of physical training; but it is easy for every one to place himself in the best position possible under the circumstances. The student who lives a proper life, and who avoids the many causes of disease to which dissipation would expose him, has little to do beyond taking care that his mode of work is judicious.

It is difficult to say how many hours of the twenty-four should be given to brain-work, and how many to body-work. If the brain, at the

time of work, is kept fixedly to its task, it is probable that a period of three or four hours at a time, and six or seven hours in the twenty-four is sufficient for it. Lighter, i.e. less intense intellectual labour may be borne for a much longer period, but the mind is not equally benefited. Three or four hours at least, alternating with the intellectual work, should be systematically devoted to the exercise of the body.

The proper amount of study varies, however, in every case; and the student, keeping strict guard on his love of ease and indolence, should determine its amount for himself. It is a good rule to exercise the mind like the body to the verge of fatigue, without carrying it to exhaustion; then, like the body, the mind gradually acquires greater and greater power; and attention and apprehension can be kept intensely acute for longer and longer periods. No student should be satisfied, unless, as he advances in his studies, he find his power of continued mental work becoming stronger.

So also with the body, if the student finds his strength lessening, his accustomed vigour less, he should not rest till he knows the cause of it. An excellent maxim says, "You cannot care too much about health, or too little about life;" that is, our health is our own, we make it and lose it, and are responsible for it; without

health duty cannot be performed, and the work which we have been sent into the world to do cannot be done. But life is not our own; it is lent to us, and when it is resumed it is not to be regretted. We must keep our health, not that we may live long, but that we may do the work of life well; and when that work is done, we should surrender the life as carelessly as we throw aside the broken pitcher, which can no more carry the water from the well.

Gentlemen, you are commencing to-day this three-fold education of the mind, the heart and the body. You alone are responsible for your progress. Commence your work in a right spirit, looking forward to the end amid the distractions and difficulties of the road, and resolving that nothing shall turn you aside from the accomplishment of your purpose. The spirit in which you must commence and go on is a religious spirit; for religion alone can supply you with proper motives, and support you amid innumerable temptations. Apply to your own case those grand words in which Milton narrates the manner in which he was to trace out and execute his immortal poem, which, projected in his early manhood, was not to be inspired, he tells us in his stately language, "by the heat of youth, or amid the vapours of wine, nor by the invocation of Dame Memory and

her syren daughters, but by devout prayers to that Eternal Being, who can enrich with all power and all utterance, and who sends out His seraphim with fire from His altar to touch and to purify the lips of whom He pleases."

THE END.

